Insp.

Stamp

August-27-12 10:53:32 AM

Packaging

Item ID: D212-664-207 Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Low Standard Aft **Start Date:** 12/06/2012 Start Oty: 1.00 **Cust Item ID: Customer:** Reference: Run Process Plan: MCJ Date: 12/08/27Tooling: Approvals: Date: Date: SPC (Y/N): Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Work Center ID Description · Run Hours Code Otv Qty Number **Draw Nbr** Revision Nbr 46 D212-664-247 Rev B (DEO) 100 MCJ 12-09-21 DOCUMENT CONTROL Memo Document Control Photocopy bluefile and create labels as per PPP D212-664-207 CHG002 Pick Kit Packaging Packaging 0.00 Memo

12-9-13

120 0.00 BENDING MACHINE - CROSSTUBES *120* CNC Bend 2 0.00 Memo CNC Alpha 160 Bender Bend tube as per Dwg D212-664-247 using CNC bender program and Folio

			DQA:	Date:	
VCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			
		••	OA Closed:	Date:	

									QA Closed:	Date:	
Work Orde	er:		· · · ·		DISPOSITION			AGAINST DE	PARTMENT,	PROCESS	
Part N					Rework Scrap Use-as-is		Skid-tube Machining moforming	Crosstube Small Fab Finishing	ł	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	No				Work Order Update		Large Fab	Composite		Supplier	
Root				Descri	iption of work order update	Initial	Ac	tion	Sign &		
Cause	` Date	Step	Qty		or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator											1
Material								•			
Setup											
Other											
Process							•.				
Supplier					•						1
Training											
Unapproved	l	1	<u> </u>	<u> </u>		<u> </u>			<u> </u>		
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Landii i	ng Gear				General	П _а .			1		7_ /
	Bending			_ _	Bend	Grain			Ovalized		Pressure/Forced
,		lot Conce	ntric to	0/5	BOM/Route	Hardw		-	Over/Under	⊢	Temperature/Cure
	Cracks	/C:			Broken/Damaged		tion Incomplete	, , , , , , , , , , , , , , , , , , ,	Part Incorre	<u> </u>	Weld
		/Crimped		-	Burrs	\vdash	tions Incomplete/	runciear.	Part Lost/M	ssing	Wrong Stock Pulled
	Cuffs Heat Tre	ant.			Contamination Countersink	Mislab	enance	·	Part Moved Positioned V	Vraná	
	—		Tubo	-	Cut Too Short				4		Other
	Ripples i	on Strip in	rube		Drill Holes	Misrea Offset	u	<u>'</u>	Power Loss/	ourge	Other
		n.ßena Naves in l	vtrucio	, - -			Calibration				
	—	waves in i Sequence		''.	Drawing Finish	\vdash	Sequence				
		sequence wist in Tul		<u> </u> -	Folio		e Dimensions				
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August-27-12 '10:53:32 AM

D212-664-207

Accept

N900040100

Setup Start

Page 2

Revision ID: Item Name:

Item ID:

Crosstube Low Standard Aft

Start Date: Required Date: 26/06/2012

12/06/2012 Start Qty: 1.00

Cust Item ID:

· Customer:

Reference:

Approvals:

Process Plan:

Date:

Date:

Tooling:

SPC (Y/N):

Date: Date: Start

Sequence ID/ Work Center ID'

130

Operation Description

QC15- Crosstube Dimensional Check

Set Up/ **Run Hours** 0.00 A?

Tool ID

Tool # Plan Code

Accept Qty

Reject Qty

Run

Reject Insp.

Number Stamp

130

QC

Quality Control

Memo

Req'd Qty: 1.00

5 17 loslix

140

Crosstubes

Crosstubes

Crosstubes

0.00

Memo

0.00 ****** ENSURE PROPER JIG POSITIONING *******

1-Drill Rivet holes as per Dwg D212-664-247 using DT8972.***Use T-Pin***

2-Drill pilot holes in tube as per Dwg D212-664-247 using DT8550 and DT8551

3-Ream hole to finish size in tube as per Dwg D212-664-247

4-*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-

664-247

5-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-

MO

									DQA:	Date:	•
NCR: Yes	s / No				WORK ORDER NON-O	CONFORM	MANCE / UF		QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No NCR No				· · · · · · · · · · · · · · · · · · ·	Rework Scrap Use-as-is Work Order Update	Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Deścri	ption of work order update	Initial	A	ction	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chief Eng	Des	cription	Date	Verification	QC Inspector
oc/Data quip/Tooling Operator Material etup Other Process supplier Fraining Unapproved											
					F	AULT CATE	GORY				

Grain

Hardware

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Inspection Incomplete

Instructions Incomplete/Unclear

Pressure/Forced

Weld

Other

Temperature/Çure

Wrong Stock Pulled

Ovalized

Part Incorrect

Part Moved

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Over/Under tolerance

General

Bend

Burrs

BOM/Route

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish Folio

Broken/Damaged

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Landing Gear

Bending

Cracks

Cuffs

Heat Treat

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Centre Not Concentric to O/S

Augusi-27-12 II	J. 33.32 AM			_							
Item ID: Revision ID: Item Name:	D212-664-20	07 v Standard Aft		Accept	*N900	040	100	ገ* ѕ	Setup Sta	IVI	S1*
Start Date: Required Date: Reference:	12/06/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item Customer:	iD:				* *N	S2*
Approvals:	Process Pla	in:	Date:	Tooling:	D	ate:	- 	F	Run Sta	1/7	R1*
	QC:		Date:	SPC (Y/N):	D	ate:			Sto	*N	R2*
Sequence ID/ Work Center ID 150 *150* QC Quality Control		Operation Description QC5- Inspect part compl Memo *** WEAR		Set Up/ Run Hours 0.00 0.00 16	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*160 *160* HandFXtube Hand Finishing Cros	stubes		LATEX GLOVES WHEN PROSSTUBE WITH WAS	0.00 ' 0.00 I HANDLING CROSSTUE SH'N WIPE	3E***				<u> 12 - 1</u>	9- <u>18</u>	
*180 *180* Outsource2 Outsource process - 1	NDT			0.00 0.00 I HANDLING CROSSTUE	3E***				_fl 18	2-09/	<i>\$</i>

Liquid Penetrant Inspection as per QSI 038
Issue P/O: 1417
Level 2 Attach copy of NDT results to work order

											DQA:	Date:	
NCR:	Yes	/ No	1	,		WORK ORDER NON-O	100	VFORM	MANCE / UPD/				•
											QA Closed:	Date:	
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Part f	Vo.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-				<u> </u>	Use-as-is]	Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR I	۷o. ₋					Work Order Update]		Large Fab	Composite		Supplier	
Root					Descri	ption of work order update	Π	nitial	Actio	n	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descrip	otion	Date	Verification	QC Inspector
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Other	Щ							**	t T				
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Landi			•			General	_	1				r	1
	-	Bending			<u> </u>	Bend	<u></u>	Grain		ļ	Ovalized	_	Pressure/Forced
	Centre Not Concentric to O/S					BOM/Route		Hardwa			Over/Under		Temperature/Cure
	Cracks					Broken/Damaged		4	ion Incomplete		Part Incorre	├	Weld
	Crushed/Crimped.					Burrs		4	tions Incomplete/Un	nclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs					Contamination		Mainte			Part Moved		
		Heat Trea				Countersink		Mislabe		<u> -</u>	Positioned V	_	7
	Inspection Strip in Tube					Cut Too Short		Misread	t		Power Loss/	Surge	Other
	Ripples in Bend					Drill Holes	1	Offset					

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio August-27-12 10:53:32 AM

Page 4

Revision ID:	D212-664-26 Crosstube Lov	v Standard Aft		Accept	*N900	040	100)* 5	Setup Start Stop	*NS1*	
Start Date: Required Date: Reference:	12/06/2012 26/06/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:			·		
Approvals:		ın:				nte:	-	F	Run Start Stop	*NR1*	•
Sequence ID/ Work Center ID 190 *100* Packaging Packaging)			Set Up/ Run Hours 0.00 0.00 HANDLING CROSSTUI	Tool ID BE***	Tool #	Plan Code	Accept Qty		Reject Insp. Number Stamp	The second
*200 *200* QC Quality Control			ATEX GLOVES WHEN	0.00 AS 0.00 AS HANDLING CROSSTUR as per Dwg D212-664-20						1	
* ? O.4 * HandFXtube Hand Finishing Cross	stubes		ATEX GLOVES WHEN	0.00 0.00 HANDLING CROSSTUE				42	12-9-1	8.	_

1- PRESSURE WASH AND THEN USE WASH'N WIPE TO CLEAN CROSSTUBE AND CUFF BEFORE CHEMICAL CONVERSION

											DQA:	Date	
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORN	MANCE / UPDATE		QA Closed:	Date	•
									<u> </u>				•
Work Orde	er:					DISPOSITION			AGAIN	IST DE	PARTMENT,	/PROCESS	
Part N	-					Rework Scrap		ľ	Skid-tube Crosstu Machining Small F	ab		Water Jet d. Eng. Coor.	Engineering Quality
NCR N	No			······································		Use-as-is · Work Order Update			oforming Finish Large Fab Compos	~ _	Rec/Stol	re/Packaging Supplier	Other
Root					Descri	ption of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
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Landi	ng G	iear				General		ř					
		Bending Centre No Cracks Crushed/O Cuffs Heat Trea	Crimped.		o/s	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink		1	on Incomplete ions Incomplete/Unclear nance		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N	ct	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
						Cut Too Short		Misread			Power Loss,		Other
	\vdash	Inspection Strip in Tube Ripples in Bend				Drill Holes		Offset		<u> </u>	-	_	

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

714gust-27-12 1	7-1 1	<u> </u>			_ 							
Item ID: Revision ID:	D212-664-2	07		Accept	*N900	040	100) *	Setup	Start	*N	S1*
Item Name:	Crosstube Lo	w Standard Aft								Stop	*NI	S2*
Start Date:	12/06/2012	Start Qty: 1.00	*1*		Cust Item I	D:					1 14 1	
Required Date: Reference:	26/06/2012	Req'd Qty: 1.00	*1*		Customer:							
Approvals:	Process Pla	in:	Date:	Tooling:	Da	ate:	ness	1	Run	Start	*N	R1*
	QC:		Date:	SPC (Y/N):		ate:				Stop	*N!	R2*
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Tumber	Insp. Stamp
206 *206* QC		QC7-Inspect Chemical C	Conversion Coat	0.00 PAS			0040	40	29	1	umbet.	Stamp
Quality Control		Memo *** WEAR	LATEX GLOVES WHE	0.00 🕻 🚱 📢 N HANDLING CROSSTUI	SE***							
210				0.00								,
210 Crosstubes		Crosstubes Memo		0.00				AS	12	2-9.	-18	
Crosstubes			LATEX GLOVES WHEN	N HANDLING CROSSTUI	3E***							
		1-Rivet and D212-664-2	assemble Cuffs with T-Pi 47. with Sika flex in Betv	n in the through bolt holes ween tube & Cuff	as per Dwg							

A/R SIKAFLEX -241/-291 BATCH: 122443

											DQA:	Dai	æ:	
NCR:	/es	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE		QA Closed:	Dat	٠. او،	•
						DISPOSITION			AGAINST		PARTMENT			
Work Ord	er:			 			7					,	₇	—
Part f	۱o. ِ					Rework Scrap Use-as-is		ſ	Skid-tube Crosstube Machining Small Fab noforming Finishing		l	Water Jet d. Eng. Coor. re/Packaging		Engineering Quality Other
NCR I	۱o.					Work Order Update]		Large Fab Composite			Supplier		
Root					Descri	ption of work order update		Initial	Action		Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ct	nief Eng	Description		Date	Verification	n	QC Inspector
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		Bending Centre No Cracks	ot Conce	ntric to	o/s	Bend BOM/Route Broken/Damaged	-	Grain Hardwa	re on Incomplete		Ovalized Over/Under Part Incorre			Pressure/Forced Temperature/Cure Weld
	Crushed/Crimped					Burrs	\vdash	- '	ions Incomplete/Unclear		Part Lost/M			Wrong Stock Pulled
		Cuffs	сппрей.	•		Contamination		Mainte	·		Part Moved	_		Tarrong Stock Lanea
		Heat Trea	at			Countersink		Mislabe	led		Positioned \	N rong	_	-
	Inspection Strip in Tube				Cut Too Short		Misread	i		Power Loss,	[/] Surge	L	Other	

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence
Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing Finish

Folio

August-27-12 10:53:32 AM Item ID: D212-664-207 Accept *N900040100* Setup Start Revision ID: Item Name: Crosstube Low Standard Aft **Start Date:** 12/06/2012 Start Qty: 1.00 Cust Item ID: **Required Date: 26/06/2012** Req'd Oty: 1.00 **Customer:** Reference: Run Start Approvals: Process Plan: Date:_____ Tooling: Date:_____ Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. **Work Center ID** Description **Run Hours** Code Qty **Qty** Number Stamp 215 QC5- Inspect part completeness to step on W/O 0.00 AS *915* Memo Quality Control *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** ***Inspect cuff with T-Pin*** 220 Spray Painting per QSI005 4.2 0.00 SprayPaint *220* 12-9-19 SprayPaint Memo 0.00 Spray Painting *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** 1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME: 121746 Start Time: 6!30 Fininsh Time: 7:15

PAINT: 123003 Start Time: \1:15 Finish Time: 12:00

												DQA:	Da	te:	
NCR: Y	es ,	/ No				WORK ORDER NON-C	100	NFORM	/IANCE / UP	DATE					•
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Work Orde	or.					DISPOSITION				AGAINST [Œ	PARTMENT	PROCESS		
Work Orde		-				Rework]		Skid-tube	Crosstube			Water Jet		Engineering
Part N	۱o.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.		Quality
	-		-			Use-as-is		Therm	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR N	۱o				· •	Work Order Update]		Large Fab	Composite			Supplier		
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Root			a .	٠ .		ption of work order update	1	nitial		tion		Sign &	Ma mifi andia		OC Inspector
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verificatio	n	QC Inspector
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		Bending				Bend		Grain		[Ovalized			Pressure/Forced
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	Cracks					Broken/Damaged		Inspecti	on Incomplete	Ţ		Part Incorre	ct		Weld
	Crushed/Crimped.					Burrs		Instruct	ions Incomplete	/Unclear		Part Lost/M	ssing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance	Ī		Part Moved			-

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish Folio

August-27-12 10:53:32 AM Item ID: D212-664-207 Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Low Standard Aft **Start Date:** 12/06/2012 Start Qty: 1.00 **Cust Item ID: Required Date:** 26/06/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Start Process Plan: Approvals: Date: Tooling: Date: Stop Date: _____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. **Work Center ID** Description **Run Hours** Qty Code Number Stamp Qty 230 QC14- Inspect Spray Paint 0.00 *230* 0.00 Memo Quality Control Wrap in plastic bag to protect from scratches 240 0.00 Crosstubes *240* Crosstubes 0.00 Memo Crosstubes 1- Assemble as per Dwg D212-664-247 1-Abrade mating surfaces of support and crosstube with 400 grit sandpaper, clean the area with 4105S wash 'n' wipe

2-Install supports with Proseal 890 per DSI9563 and QSI 015 A/R Proseal 890 Batch: 123103

3- Torque bolts as per dwg . Whis on 21 (1)

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UI	PDATE	QA Closed:	Date:	
Work Orde	or.	·			·	DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part f	- . No.					Rework Scrap Use-as-is Work Order Update		1 Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	А	ction	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Des	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved							A. I. I.	LT CATE	*				
Landi	na 6	2005				General	AUI	LICATE	GURT				
Lafiqi	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion					Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete enance eled	e/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
I		Torque W	vaves in E	xtrusio	n j	Drawing	1	Out of	Calibration				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 85629

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Quality Control

85629

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Item ID: D212-664-207 Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Low Standard Aft **Start Date:** 12/06/2012 Start Qty: 1.00 **Cust Item ID: Required Date:** 26/06/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Start Process Plan: Approvals: Date: **Tooling:** Date: Stop Date: ___ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Qty Code Qty Number Stamp 250 QC5- Inspect part completeness to step on W/O *250* Memo Quality Control 255 Pick Kit 0.00 *255* Packaging 0.00 Memo Packaging 260 QC4-100% Inspect kits for completeness Memo

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	O	NFORM	MANCE / UPDATE				•
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Work Ord	or.					DISPOSITION			AGAII	NST DE	PARTMENT	/PROCESS	
WOIR Ora	· -					Rework	7		Skid-tube Crossto	ube		Water Jet	Engineering
Part I	No.					Scrap	1		Machining Small		Pro	d. Eng. Coor.	Quality
	•					Use-as-is		Therm	noforming Finish	ing	Rec/Sto	re/Packaging	Other
NCR I	No.					Work Order Update]		Large Fab Compo	site		Supplier	
Root					Descri	ption of work order update	Π	Initial	Action		Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
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Supplier	Ш												
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		Bending			ļ	Bend	\perp	Grain			Ovalized		Pressure/Forced
	Ш	Centre No	ot Concei	ntric to C	D/S	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks					Broken/Damaged	<u> </u>	Inspecti	on Incomplete		Part Incorre	ct	Weld
	Crushed/Crimped.					Burrs	_	-{	ions Incomplete/Unclear		Part Lost/M	_	Wrong Stock Pulled
	Cuffs					Contamination		Mainte	nance		Part Moved		
		Heat Trea	at			Countersink		Mislabe	led		Positioned \	Wrong	- 1
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	1		Power Loss,	'Surge	Other
	Inspection Strip in Tube Ripples in Bend					Drill Holes		Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio *85629*

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August-27-12	10:53:32 AM	enta .		Annya"						Page		
Item ID: D212-664-207 Revision ID:				*N900040) *	Setup Sta	urt *N	S1*	
Item Name:	Crosstube Lov	w Standard Aft							St	op * [1 C2*	
		Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:				10		
Approvals:	Process Pla	ın:	Date:	Tooling:	— - — — Da	ite:		I	Run Sta	^{irt} *N	IR1*	
	QC:		Date:	SPC (Y/N):	Date:				Sto	^{op} *N	IR2*	
Sequence ID/ Work Center 270	ID	Operation Description		Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
270		Packaging								_		
Packaging		Memo		0.00						<i>I</i>		
Packaging		Identify an	d pack for shipping as pe	or PPP D212-664-207					[A	7/7/2		
280		QC21- Final Inspection	- Work Order Release	0.00								
280 QC Quality Control		Memo		0.00					MU	12-0	15-60	
Quanty Control										N 1	W 2-91	

												DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORN	MANCE / UP	DATE				•
								T				QA Closed:	Date:	
Work Orde	or.					DISPOSITION				AGAII	NST DE	PARTMENT	/PROCESS	
WOIR OIG						Rework	7		Skid-tube Crosstube				Water Jet	Engineering
Part I	No.					Scrap	1	Machining Small Fab			Pro	d. Eng. Coor.	Quality	
	-				***********	Use-as-is		Therm	oforming	Finish	ing	Rec/Sto	re/Packaging	Other
NCR I	\o. -		<u> </u>			Work Order Update Large Fab Co			Compo	omposite Supplier				
Root					Descri	ption of work order update		Initial	Ac	tion		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Cł	nief Eng	Desc	ription		Date	Verification	QC Inspector
Doc/Data														
Equip/Tooling	Ш													
Operator	Ш													
Material	Ц													
Setup	Ц											.		
Other													1	
Process	Ц									-	•			
Supplier	Ц		1			•								
Training	Ш											ĺ		
Unapproved														· · · · · · · · · · · · · · · · · · ·
							FAU	LT CATE	SORY					
Landi					ــــم	General	_	7				1	_	٦
	-	Bending				Bend		Grain				Ovalized	<u> </u>	Pressure/Forced
	\vdash	Centre No	ot Conce	ntric to	o/s	BOM/Route	\perp	Hardwa			<u> </u>	Over/Under	├	Temperature/Cure
	Н	Cracks				Broken/Damaged		-i '	on Incomplete		<u> </u>	Part Incorre	<u> </u>	Weld
	\vdash	Crushed/	Crimped.			Burrs		┥	ions Incomplete	/Unclear	<u> </u>	Part Lost/M		Wrong Stock Pulled
	\vdash	Cuffs				Contamination	_	Mainte			_	Part Moved		
		Heat Trea				Countersink	L	Mislabe				Positioned \	_	7
	-	Inspectio	·	Tube		Cut Too Short	L	Misread	ŀ			Power Loss,	'Surge	Other
	1	Ripples in	Bend		Drill Holes			Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID: 85629

Parent Item:

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

85629

D212-664-207

Start Date: 12/06/2012

Required Date: 26/06/2012

Page 1

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:A New Issue 07.09.12 EC verified by: JLM

IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Status Issued
D212-664- 207TRNRevA		Manufactured	No			110	Each	0.0000	1	1		
*D212-664 Crosstube Turning Detail	4-207TF	RNRevA	*		B	8947	16		**		RM	12-9-13
D3660-1		Manufactured	No			140	Each	20.0000	2	2		
D3660-1	k								**	_		

CUFF

Location Loc Qty Loc Code LG 2 2 ST477 10 87445 10 ST482 53501 76983 88394 6.

12-9-17 OM

								DQA:	Date:				
NCR: Yes	/ No			WORK ORDER NON	I-CONFOR	MANCE / UI		QA Closed:	Date:	•			
Work Order:				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No.				Rework Scrap Use-as-is	Ther	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing			Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other			
NCR No.				Work Order Update		Large Fab	Composite		Supplier				
Root				Description of work order update	Initial	А	ction	Sign &					
Cause	Date	Step	Qty	or Non-conformance	Chief Eng	Des	cription	Date	Verification	QC Inspector			
Doc/Data													
Equip/Tooling									,				
Operator	_				j				,				
Material]				1								
Setup													
Other													
Process	3												
Supplier]												
Training	1												
Unapproved]												
					FAULT CATE	GORY							
Landing	Gear			General									

Bending	Bend	Grain	Ovalized	Pressure/Forced
Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure
Cracks	Broken/Damaged	Inspection Incomplete	Part incorrect	Weld
Crushed/Crimped.	Burrs ·	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
Cuffs	Contamination .	Maintenance	Part Moved	
Heat Treat	Countersink	Mislabeled	Positioned Wrong	_
Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge	Other
Ripples in Bend	Drill Holes	Offset	 	
Torque Waves in Extrusion	Drawing	Out of Calibration		
Turning Sequence	Finish	Out of Sequence		
Wave/Twist in Tube	Folio	Outside Dimensions		

August-27-12 10:53:36 AM

Work Order ID: 85629

Parent Item:

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

Purchased

Manufactured

85629

No

D212-664-207

Start Date: 12/06/2012

Required Date: 26/06/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-06

CHERRY RIVET

CR3212-4-06

220 Each 796.0000 44 44

**

A 12-9-18

Loc Oty	Loc Code		
503			
503		44	
240			
40			-
200			•
53			
18			***************************************
8			
27			
240 Each	162.0000	4 4	
	**		W 12.09.20
	503 503 240 40 200 53 18 8 27	503 503 240 40 200 53 18 8 27 240 Each 162.0000	503 503 240 40 200 53 18 8 27 240 Each 162.0000 4 4

D3595-063-530 *D3595-063-530*

RUBBER CUSHION

Location	Loc Qty	Loc Code	
LG	50		
79932	13		
82656	37		
LG051	73		
87833	73		
MAT052	39		
63407	6		
67185	6		
70067	18		
72745	2		
75783	7		

										DQA:	Date:	
NCR: Y	res / No				WORK ORDER NON-O	100	NFORM	MANCE / UPDA	ATE			
										QA Closed:	Date:	
Work Orde	or:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part No. NCR No. Descr					Rework Scrap Use-as-is Work Order Update Rework Skid-tube Machining Thermoforming Large Fab			Crosstube Small Fab Finishing Composite	Fab Prod. Eng. Coor. Quality hing Rec/Store/Packaging Other			
Root				Descri	ption of work order update		Initial	Actio	n	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descrip	otion	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved												
				•	F	AUI	LT CATE	GORY				
Landi	ng Gear				General		_					
Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs			O/S	Bend BOM/Route Broken/Damaged Burrs Contamination		Instruct Mainte	ion Incomplete tions Incomplete/Un enance		Ovalized Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled	
	Heat Treat				Countersink	i	Mislabeled			Positioned Wrong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Parent Item:

August-27-12 10:53:36 AM

Work Order ID: 85629

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

Manufactured

Purchased

85629

D212-664-207

Start Date: 12/06/2012

Required Date: 26/06/2012

Start Qty: 1.00

**

**

Required Qty: 1.00

D2940-1

Support

MS21920-28

D2940-1

Location Loc Qty Loc Code LG052 23 79118 2 82657 87921 20

240

No

240 Each

Each

78.0000

23.0000

Clamp(per MIL-DTL-8783C)

Location	Loc Qty	Loc Code
FG	5	
105884	5	
LG050	55	
118713	3	
120054	2	
122518	50	
LG051	18	
121440	8	
122204	10	

255

Each

D3428-1

Placard

Manufactured No

13.0000 **

12/09/21

Location Loc Qty ST042 13 83582 85228 12

Loc Code

85228

										DQA:	Date:		
NCR: Ye	es / No				WORK ORDER NON-CONFORMANCE / UPDATE					QA Closed:	: Date:		
Work Orde	r:				DISPOSITION	AGAINST DEPARTMENT/PROCESS							
					Rework		Skid-tube Crosstube		Crosstube	Water Jet		Engineering	
Part N	Part No.				Scrap	1	Machinir		Small Fab	Pro	od. Eng. Coor.	Quality	
				Use-as-is]	Thermoforming		Finishing	Rec/Store/Packaging		Other		
NCR N	0.				Work Order Update		Large Fab Compos		Composite		Supplier		
												,	
Root				Descri	ption of work order update	1	nitial	Α	ction	Sign &			
Cause	Date	Step	Qty	(or Non-conformance	Chi	ief Eng	Des	cription	Date	Verification	QC Inspect	or
Doc/Data										i			
Equip/Tooling													
Operator													
Material													

Landing Gear General Grain Pressure/Forced Ovalized Bending Bend BOM/Route Temperature/Cure Centre Not Concentric to O/S Hardware Over/Under tolerance Weld Broken/Damaged Cracks Inspection Incomplete Part Incorrect Burrs Wrong Stock Pulled Crushed/Crimped. Instructions Incomplete/Unclear Part Lost/Missing Cuffs Contamination Maintenance Part Moved Positioned Wrong Mislabeled Heat Treat Countersink Inspection Strip in Tube Power Loss/Surge Other Cut Too Short Misread Ripples in Bend **Drill Holes** Offset Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Out of Sequence Finish Folio Wave/Twist in Tube **Outside Dimensions**

FAULT CATEGORY

Setup
Other
Process
Supplier
Training
Unapproved

Page 4

Picklist Print

August-27-12 10:53:36 AM

Work Order ID: 85629

Parent Item:

MS21042L6

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

NAS1149D0663J Purchased

Purchased

Purchased

No

No

No

85629 *D212-664-207*

Start Date: 12/06/2012

6

Required Date: 26/06/2012

Start Qty: 1.00

Required Qty: 1.00

MS21042I 6

Washer AN6-40A

		**	
			 _
Location	Loc Qty	Loc Code	

Each

255

Location	<u>Lo</u>	c Oty	Loc Code				•	
314		578						
122441		578			1224	41		
ST300		291						
117677		25				_		
118384		3				_		
118927		48				 .		
119075		15			_	_		
120308		200						
	255	Each	0.0000	18	18			
			*	* *	1230	21 gB	Sp	
	255	Each	122.0000	4	4	_	•	
			*	**		28	12/09	191

869.0000

Location	Loc Qty	Loc Code
ST340	50	
122416	50	
ST342	72	
120187	66	
120833	4	
121827	2	

120187

										DQA:	Date:	
NCR:	es /	No			WORK ORDER NON-O	100	VFORI	MANCE / UPDATE		QA Closed:	Date:	•
		- 			DISPOSITION			AGAI		PARTMENT		
Work Orde	er:				_	,		 1	. —			
Part I					Rework Scrap Use-as-is Work Order Update	1	!	Skid-tube Crossi Machining Small noforming Finis Large Fab Compo	Fab hing		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	liption of work order update		Initial	Action		Sign &		
Cause	Da	ite Ste	o Qty		or Non-conformance	Cr	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling								·				
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training						1				 		
Unapproved	<u> </u>											
					F	AUI	LT CATE	GORY				
Landi	ng Gear			,	General		,		_	1		٦
	Bend	ding		_	Bend	_	Grain			Ovalized	-	Pressure/Forced
	Cent	re Not Con	centric to	o/s	BOM/Route	_	Hardwa		<u> </u>	Over/Under	tolerance	Temperature/Cure
	Crac			L.	Broken/Damaged	_	-1	ion Incomplete		Part Incorre	 	Weld
	\vdash	hed/Crimp	ed.		Burrs		4	ions Incomplete/Unclear		Part Lost/M		Wrong Stock Pulled
	Cuff	S			Contamination		Mainte			Part Moved	•	
	Heat	Treat			Countersink		Mislabe	eled		Positioned \	N rong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish Folio August-27-12 10:53:36 AM

Work Order ID: 85629

Parent Item:

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

85629 *D212-664-207*

Start Date: 12/06/2012

Required Date: 26/06/2012

Start Qty: 1.00

Required Qty: 1.00

Purchased No

255

Each

89.0000

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			0	, , ,
Location	Loc Qty	Loc Code		\bigcirc
ST340	50			ar -
122407	50			
ST342	39			
120423	9			
121825	30		121825	

												DQA:	Da	ite:	
NCR:	⁄es	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE					•
											(QA Closed:	Da	ate:	
Work Orde	or					DISPOSITION				AGAINST D	EP	PARTMENT	/PROCESS		
Part N	- . No.					Rework Scrap Use-as-is Work Order Update		1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite			Water Jet d. Eng. Coor e/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	tion	T	Sign &	:		
Cause		Date	Step	Qty	1	or Non-conformance	Cr	nief Eng	Desc	ription		Date	Verificatio	n l	QC Inspector
Doc/Data						·					T				
Equip/Tooling															
Operator							1								• .
Material											١				
Setup															
Other															
Process											1				
Supplier				:											
Training						<i>(</i>)	1								
Unapproved							1				1				
						F	AUI	T CATE	GORY						
Landi	ng G	Gear	· -			General		_							
		Bending				Bend		Grain			٦	Ovalized			Pressure/Forced
· ·		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		٦	Over/Under	tolerance		Temperature/Cure
	П	Cracks				Broken/Damaged		Inspect	on Incomplete		٦	Part Incorre	ct		Weld
	П	Crushed/0	Crimped.			Burrs		Instruct	ions Incomplete/	Unclear	٦	Part Lost/Mi	issing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		٦	Part Moved			•

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

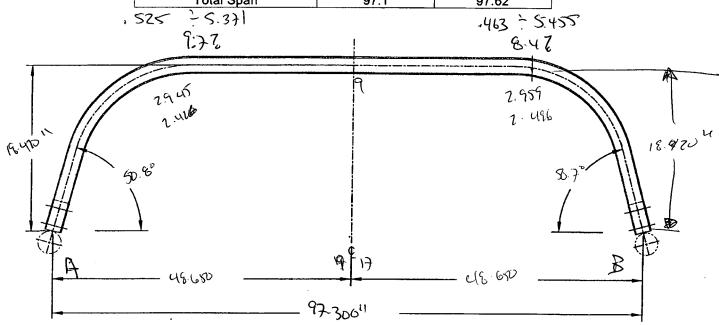
Drawing

Finish

Folio

DART AEROSPACE LTD	Work Order:	85629
Description: Crosstube Low Aft (205/212)	Part Number:	D212-664-207
Inspection Dwg: D212-664-247 Rev: B		Page 1 of 1

Required Dimension	Min	Max
Height	18.16	18.42
1/2 Span	48.55	48.81
Angle	49	52
Total Span	97.1	97.62



Comments								
Sinc p=	9.7%	crushing	\bigcirc	19 PASSOT				
miorce =	9 P,	13/N.						
Sinc BZ	8.4%	crushi	$-\omega$	17 19550				

QC15 Inspection	1.46
Date	8 9 ,710117

Rev	Date	Change	Revised by	Approved
Α	08.02.29	New Issue	KJ/JM , ,	
В	10.04.01	Dwg Rev updated	KJ X	/2
			· · · · · · · · · · · · · · · · · · ·	

Dart Aerospace Ltd

W/O:			WC	RK ORDER CHANGE	S			· · · · · · · · · · · · · · · · · · ·	
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date Q	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
							Trou mgi		
		:	·						
Part No		PAR #:	Fault Cate	gory:	NCR: Yes	No DQA: _	Date: _		
		esolution:							
NCR:			WORK ORDI	ER NON-CONFORMA	NCE (NCR)			
DATE	STEP	Description of NC							
		Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector	
							·		
<u>.</u>									
								,	

H:\front\forall RMS\Quality Assurance\approved QA\NCRWO RevE

item	Qty -247	Qty -247B	Part Number	Description
1	X		D212-664-247	CROSSTUBE ASSEMBLY (205/212 LOW AFT)
2		Х	D212-664-247B	CROSSTUBE ASSEMBLY (214 LOW AFT)
3	1	1	D6008-132	CROSSTUBE
4	2	2	D2940-1	SUPPORT
5	4	4	D3595-063-530	RUBBER CUSHION
6	2	2	D3660-1	CUFF
7	4	4	MS21920-28	CLAMP (OR MS21920-30)
8	44	44	CR3212-4-06	RIVET (OR M7885/3-4-06)
9	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS ADHESIVE)
10	A/R	A/R	SIKAFLEX-241/-291	SEALANT (OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT)

GENERAL NOTES:

D

С

1) MATERIAL: MANUFACTURED FROM D6008-132

FINISHED LENGTH = 128.268±0.020 (BEFORE BENDING/TRIMMING)

FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
 PAINT OUTSIDE PER DART QSI 006 4.2

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4) UNITS: INCHES UNLESS OTHERWISE NOTED.

IOLERANCES ARE PER DARI USI DIS UNICESS DI RERVIGE NOTED.
UNITS: INCHES UNLESS OTHERWISE NOTED.
BREAK SHARP EDGES: 0.005 TO 0.010 Max.
IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF
USING VIBRATING STYLUS.
WEIGHT. 2015 564 575 565 F6 (CSE) IN D212 564.

WEIGHT: D212-664-247 = 36.6 lbs (PER IIN-D212-664) D212-664-247B = 36.6 lbs (PER IIN-D212-664)

- PART IS SYMMETRIC ABOUT CENTERLINE.
 WHEN MACHINING TAPER, RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALY, TRANSITION SHOULD

BE SMOOTH.

1) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON 0.D., EXCEPT UP TO 10% IS ALLOWED IN AREA NOTED.

1) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER OSI 038.

12) INSTALL D2940-1 SUPPORT USING 0.3° TO 0.0° THICK LAYER OF MACNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER OSI 015. LET CURE FOR 12 HOURS AFTER INSTALI JATION AND DEFOR TO DEFOR TO DEFOR ACTION.

INSTALL ATION AND PRIOR TO PACKAGING.

13) INSTALL MS21920-28 CLAMPS (OR 30) WITH DS395-063-530 RUBBER CUSHIONS TO SECURE THE D2940-1

SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.

14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SUPPORT.

15) THE OUTSIDE SUPPORT OF THE TUBE OF CROSSTUBE SUPPORT. SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, INCKS, OR DENTS.
DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

ONACCEPTABLE.

15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

16) INSTALL D3660-1 CUFF AFTER CHEMICAL CONVERSION COAT BUT BEFORE PAINT, WITH A LAYER OF SIKAFLEX-241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS 82 SEALANT BETWEEN CUFF AND CROSSTUBE. SEAL EDGE OF CUFF TO ENSURE NO GAPS.

17) TOUCH-UP HOLES WITH CHEMICAL CONVERSION COAT.

SHOP COPY **RETURN TO ENGINEERING** UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER 0. 85629 MLJ 12/06/12

DEO ATTACHED

D

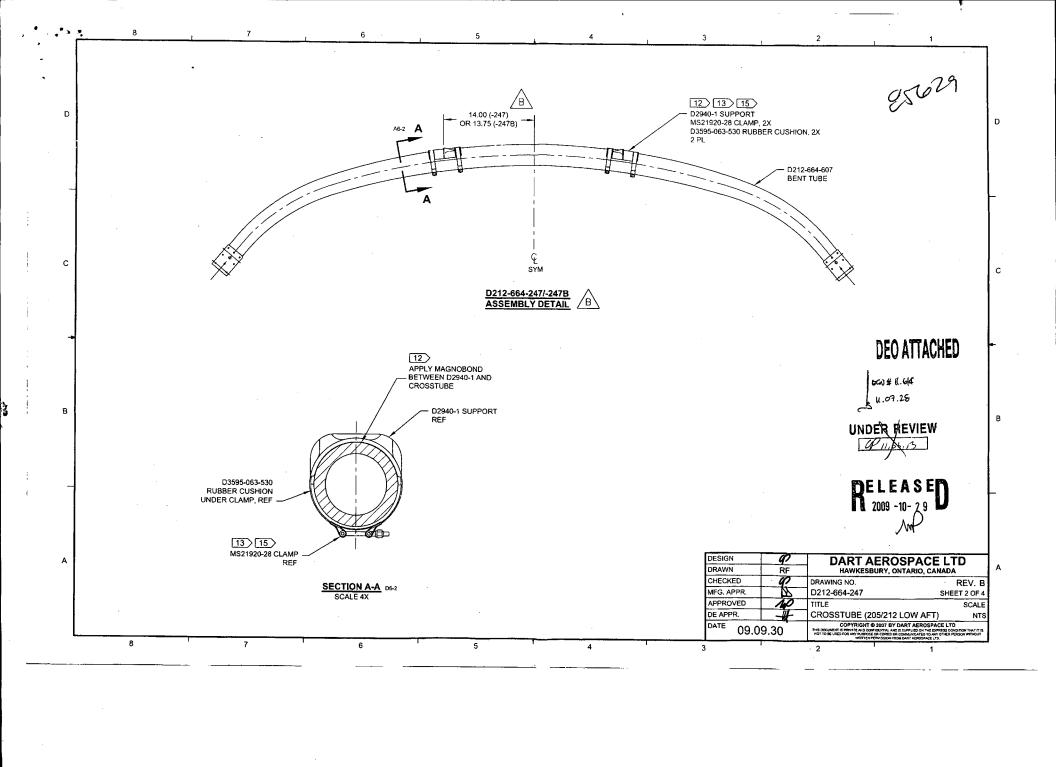
С

555# 11-614 11.07.28 UNDER REVIEW

В	REVIS CURR	E GENERAL N ENT STANDAR	RF	09.09.30			
Α	NEW I	SSUE		CP	07.07.07		
REV.			DESCRIPTION	BY	DATE		
DESIGN	1	P	DART AEROSP	ACE	LTD		
DRAWN	i	RF	HAWKESBURY, ONTAR				
CHECK	ED	97	DRAWING NO.		REV. B		
MFG, A	PPR.	18	D212-664-247		SHEET 1 OF 4		
APPRO	VED	NP.	TITLE		SCALE		
DE APP	R.	4	CROSSTUBE (205/212 LOV	V AFT)	NTS		
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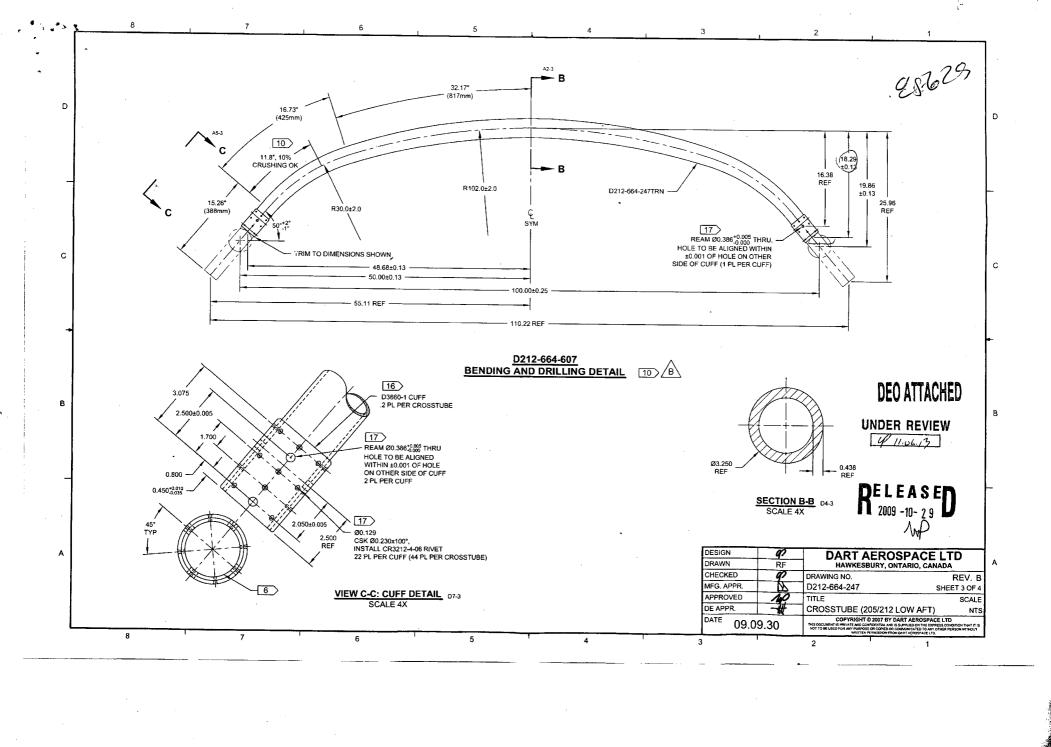
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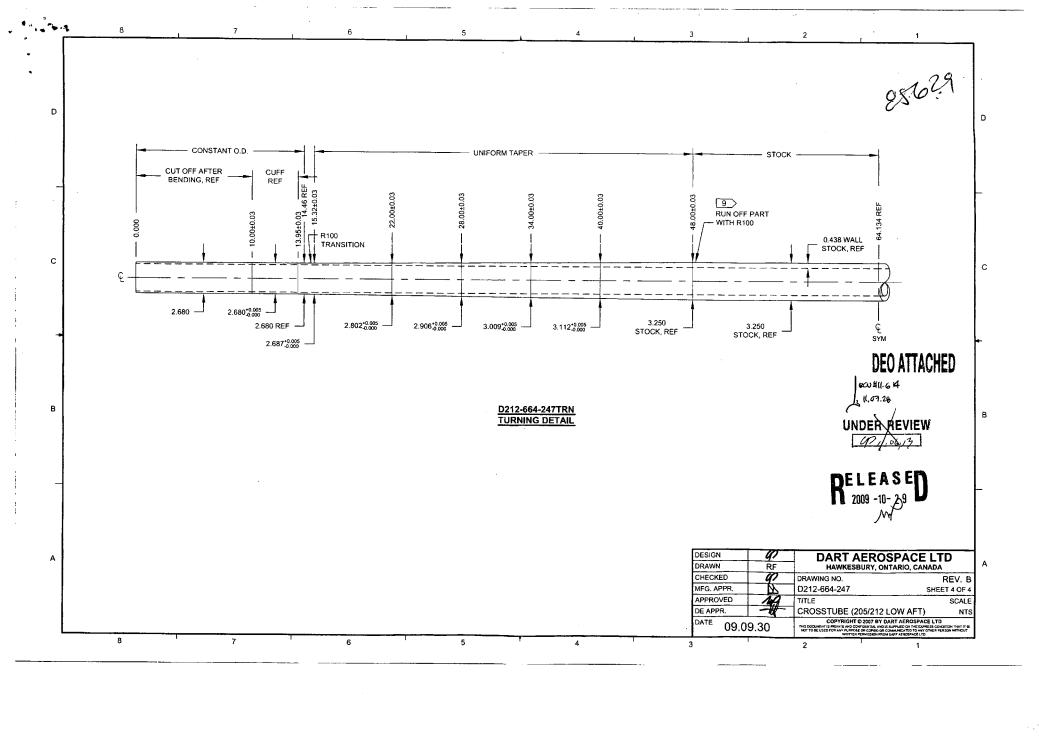
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DRAWING NO. D212-664-247	TITLE REV. B CROSSTUBE ASS'Y (205 LOW AFT)	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D212-664-247-B-1	SHEET NO. SCAL	
DRAWN 9	CHECKED A>S	MFG. APPR.	APPROVED (W)	DE APPR.	
DATE 11.07	15 DATE /1, 67.70	DATE 11.07.21	DATE 11/07/3)	DATE # 07.21	

PURPOSE:

REPLACE MAGNOBOND WITH PROSEAL.

25629

CHANGE:

is:

WAS:

9	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023
				ADHESIVE (TEXTRON/BELL SPEC. 299-947-100,
				TYPE II, CLASS 2 ADHESIVE)

NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

18

- 12) TO INSTALL D2940-1 SUPPORT: ABRADE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04° TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

WAS:

- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.



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Dart Aerospace Ltd

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LIQUID PENETRANT TEST REPORT

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